METHOD, APPARATUS, AND
COMPUTER PROGRAM PRODUCT
FOR SIMULATION OF MIXED-SIGNAL
SYSTEMS

ABSTRACT

[117]   The present invention comprises a method, an apparatus, and a computer program product for simulating a mixed-signal system. The invention comprises a first

5   operation of generating a matrix-based wavelet operator representation of equations characterizing a system, with the matrix-based wavelet operator representation including wavelet connection coefficients. A second operation is performed by selecting a number of wavelets and a set of wavelet basis functions with which to represent a performance of the system, whereby the wavelet

10   operator, the number of wavelets and the set of wavelet basis functions represent a wavelet model of the system. A third operation is performed by iteratively applying the wavelet model over a series of clock cycles to develop a behavioral model of the system. The invention has particular use in the area of computer-aided design and may be applied to any suitable system, whether electrical,

15   mechanical, or other.